

Technology Opportunity

Laser Light Scattering

Laser light scattering (LLS) is a widely used technique allowing the measurement of particle size or molecular weight. The fluctuating motion of submicroscopic particles in liquid suspension reveals not only their size but also their shape and tendency to aggregate. NASA, in cooperation with several component suppliers, is developing improved LLS instruments for use in space experiments investigating colloid behavior and protein crystal growth.

Potential Commercial Uses

- Quality control in pharmaceuticals, milk, paint, or adhesives
- Turbomachinery health monitoring
- Ceramic slips

Benefits

- Light weight; portable
- Wide range of applications
- Higher concentration than old instruments

The Technology

Lewis researchers, aided by collaborators from around the world, have developed smaller, easier-to-use, more broadly applicable laser light scatter-

ing instruments. The new instruments use compact solid-state lasers and detectors, and because they employ fiber optics, are easier to align. Our latest developments extended the range of application by two orders of magnitude.

Options for Commercialization

Seeking partnerships with potential users in industry or academia to further develop the system. Also seeking industrial partners to cooperatively develop additional applications for this technology.

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